



# ICAO ENGINE EXHAUST EMISSIONS DATA SHEET

## SUBSONIC ENGINES

ENGINE IDENTIFICATION: PW4084  
UNIQUE ID NUMBER: 8PW089  
COMBUSTOR:  
ENGINE TYPE: TF  
BYPASS RATIO: 6.4  
PRESSURE RATIO ( $\pi_{00}$ ): 36.2  
RATED THRUST ( $F_{00}$ ) (kN): 369.6

### REGULATORY DATA

CHARACTERISTIC VALUE:	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
D <sub>p</sub> /F <sub>00</sub> (g/kN) or SN	4.5	23.9	72.8	13.5
AS % OF ORIGINAL LIMIT	23.0	20.3	64.8	81.6
AS % OF CAEP/2 LIMIT (NO <sub>x</sub> )			81.0	
AS % OF CAEP/4 LIMIT (NO <sub>x</sub> )			91.7	
AS % OF CAEP/6 LIMIT (NO <sub>x</sub> )			102.0	
AS % OF CAEP/8 LIMIT (NO <sub>x</sub> )			116.4	

### DATA STATUS

- PRE-REGULATION  
x CERTIFICATION  
- REVISED (SEE REMARKS)

### TEST ENGINE STATUS

- NEWLY MANUFACTURED ENGINES  
x DEDICATED ENGINES TO PRODUCTION STANDARD  
- OTHER (SEE REMARKS)

### EMISSIONS STATUS

x DATA CORRECTED TO REFERENCE  
(ANNEX 16 VOLUME II)

### CURRENT ENGINE STATUS

(IN PRODUCTION, IN SERVICE UNLESS OTHERWISE NOTED)  
x OUT OF PRODUCTION (DATE: - )  
- OUT OF SERVICE (DATE: - )

### MEASURED DATA

MODE	POWER SETTING (%F <sub>00</sub> )	TIME (minutes)	FUEL FLOW (kg/s)	HC	CO	NO <sub>x</sub>	SMOKE NUMBER
TAKE-OFF	100	0.7	3.411	0.10	0.10	45.00	10.5
CLIMB OUT	85	2.2	2.689	0.10	0.10	35.50	4.8
APPROACH	30	4.0	0.875	0.20	0.40	12.00	0.8
IDLE	7	26.0	0.242	2.70	18.73	4.40	0.0
LTO TOTAL FUEL (kg) or EMISSIONS (g)			1086	1111	7205	23229	-
NUMBER OF ENGINES				1	1	1	1
NUMBER OF TESTS				3	3	3	3
AVERAGE D <sub>p</sub> /F <sub>00</sub> (g/kN) or AVERAGE SN (MAX)				2.9	19.5	62.8	10.5
SIGMA (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							
RANGE (D <sub>p</sub> /F <sub>00</sub> in g/kN, or SN)							

### ACCESSORY LOADS

POWER EXTRACTION 0 (kW)  
STAGE BLEED 0 (% CORE FLOW)

AT - POWER SETTINGS  
AT - POWER SETTINGS

### ATMOSPHERIC CONDITIONS

BAROMETER (kPa)	101.3
TEMPERATURE (K)	288
ABS HUMIDITY (kg/kg)	0.0063

### FUEL

SPEC	Jet A
H/C	1.92
AROM (%)	20.3

MANUFACTURER: Pratt & Whitney  
TEST ORGANIZATION: Pratt & Whitney  
TEST LOCATION: East Hartford, Ct  
TEST DATES: 26/04/1994-02/05/1994

### NO<sub>x</sub> REGULATION PARAGRAPH

x	2.3.2 c) (CAEP/4)
	2.3.2 d) (CAEP/6)
	2.3.2 e) (CAEP/8)

### REMARKS

1. Data from X832-4
2. D<sub>p</sub>/F<sub>00</sub> CO (char) wrongly entered originally as 23.0 [2PW062].
3. Corrected in version 15 to 23.9 and % of standard recalculated

Compliance with Fuel Venting requirements:

- ('x' if complies, 'PR' if pre-regulation, '-' if information is not available)